

**REMARKS**

The Examiner is thanked for the due consideration given the application. Claims 1-20 42, 43 and 47 are pending in the application. Claim 1 has been amended to improve the language and to generally incorporate subject matter canceled from claim 14. Claims 3, 4 and 9 have been amended to improve their language in a non-narrowing fashion. Claim 47 is new and sets forth subject matter generally found in claims 1, 4, 6 and 43.

No new matter is believed to be added to the application by this amendment.

**Objections to the Claims**

Claim 1 has been objected to as containing informalities. The comments in the Official Action have been considered, and claim 1 has been amended to be free from informalities.

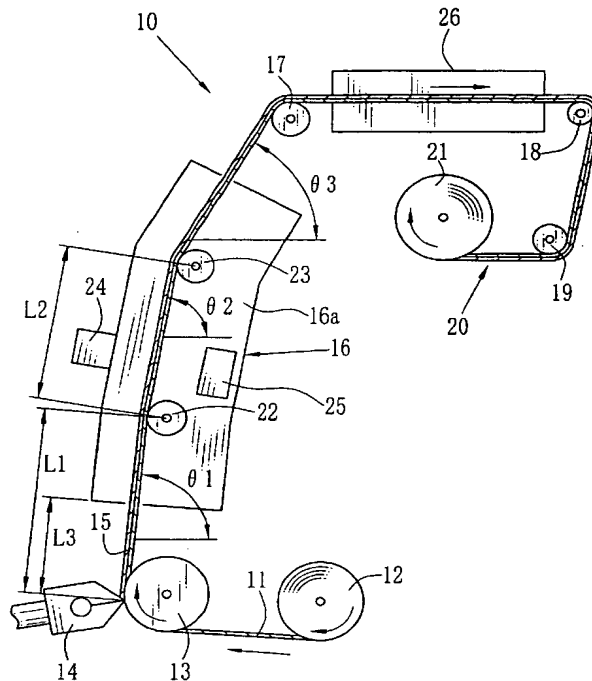
**Rejections Based on ENDO et al.**

Claims 1-3, 5, 14, 19 and 20 have been rejected under 35 USC §102(a or e) as being anticipated by or, in the alternative, under 35 USC §103(a) as being unpatentable over ENDO et al. (U.S. Publication 2003/0131793). Claims 4, 6-8, 15, 16, 18, 42 and 43 have been rejected under 35 USC §103(a) as being unpatentable over ENDO et al. These rejections are respectfully traversed.

The present invention pertains to a method for drying a coating layer in which a web is transported nearly vertically, i.e., 60°-90°, into a drying apparatus immediately after coating.

The present invention is illustrated, by way of example, in Figure 1 of the application, which is reproduced below.

FIG.1



One feature of the present invention includes side plates that are disposed on two sides of the drying device so as to prevent solvent vapor from the coating layer from flowing out of the drying device.

Claim 1 of the present invention recites, in part:

"inclining with one or larger number of guide rollers the upward transporting of said web from said inclination toward a horizontal direction," and "said inclination is defined by the guide rollers having transport angle  $\theta_1$  at an entrance of the drying device,  $\theta_2$  in the casing of the drying device and  $\theta_3$  at an

exit of the drying device, and  $60^{\circ} \leq \theta_3 \leq \theta_2 \leq \theta_1 \leq 90^{\circ}$ ,  $\theta_3 < \theta_1$ , wherein  $\theta_1$ ,  $\theta_2$  and  $\theta_3$  are angles with respect to the horizontal direction, and wherein side plates are disposed on two sides of the drying device so as to prevent the solvent vapor from the coating layer from flowing out of the drying device."

ENDO et al. pertain to a production apparatus of multilayer coating film. This apparatus is typically shown in Figure 2 of ENDO et al., which is reproduced below.

FIG.2

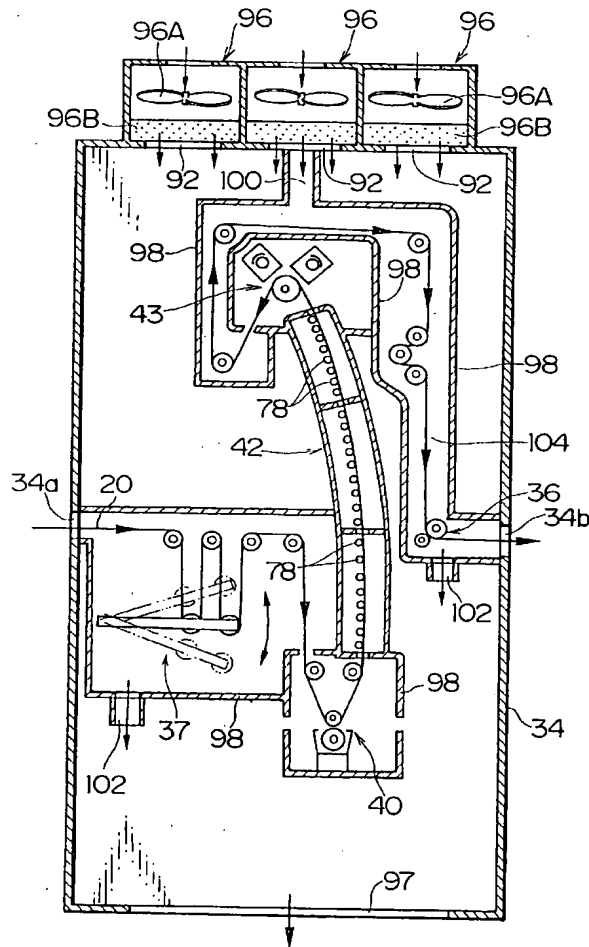
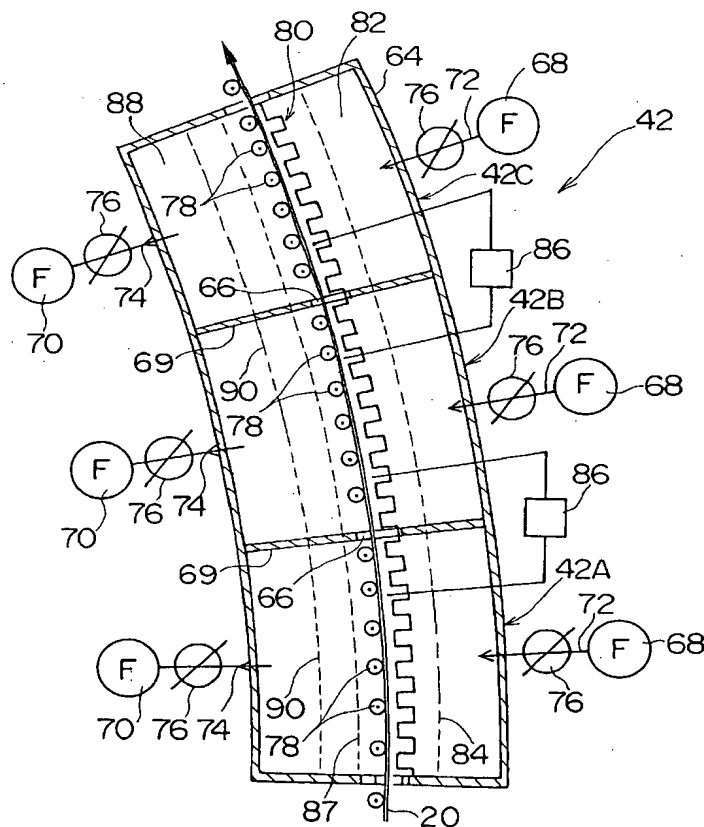


Figure 2 of ENDO et al. shows a web 20 that is given arcuate support by 25 backup rollers 78. Figure 1 of ENDO et al. also shows a dryer having rollers.

All of the plates 80, 84, 97, 90 in ENDO et al. are disposed on the front or rear side of the web 20 (see Figure 5, reproduced below). However, the ENDO et al. reference fails to teach or infer side plates from preventing air flow on both sides of the web, such as is set forth in instant claim 1 of the present invention.

FIG.5



ENDO et al. also fail to disclose guide rollers defining angle of inclination, such as is set forth in claim 1 of the present invention.

Nonetheless, at page 5 the Official Action asserts: "Alternatively, while the figures of ENDO et al. would appear to meet the claimed angle criteria required by Applicants' claims, there is no explicit discussion of the angles employed in the illustrated apparatus configuration, and the figures need not necessarily be to scale, however . . ."

However, when the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. See *Hockerson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000) (The disclosure gave no indication that the drawings were drawn to scale. "[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue."). However, the description of the article pictured can be relied on, in combination with the drawings, for what they would reasonably teach one of ordinary skill in the art. *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977) ("We disagree with the Solicitor's conclusion, reached by a comparison of the relative dimensions of appellant's and Bauer's drawing figures, that Bauer 'clearly points to the use of a chime length of roughly 1/2 to 1 inch for a whiskey barrel.' This ignores the

fact that Bauer does not disclose that his drawings are to scale. ... However, we agree with the Solicitor that Bauer's teaching that whiskey losses are influenced by the distance the liquor needs to 'traverse the pores of the wood' (albeit in reference to the thickness of the barrelhead) would have suggested the desirability of an increased chime length to one of ordinary skill in the art bent on further reducing whiskey losses." 569 F.2d at 1127, 193 USPQ at 335-36.)

In this case, the Official Action impermissibly takes inferences from the drawings angles, and asserts that the claimed angular range would be available to one of ordinary skill via routine experimentation. However, it is impermissible to extract any numerical data from the drawings absent an indication that they are to scale.

As a result, ENDO et al. fail to anticipate claim 1 of the present invention, which defines angle through the device where  $60^{\circ} \leq \theta_3 \leq \theta_2 \leq \theta_1 \leq 90^{\circ}$ ,  $\theta_3 < \theta_1$ . Claims depending on claim 1 are patentable over ENDO et al. for at least these reasons. A *prima facie* case of unpatentability over ENDO et al. has thus not been made.

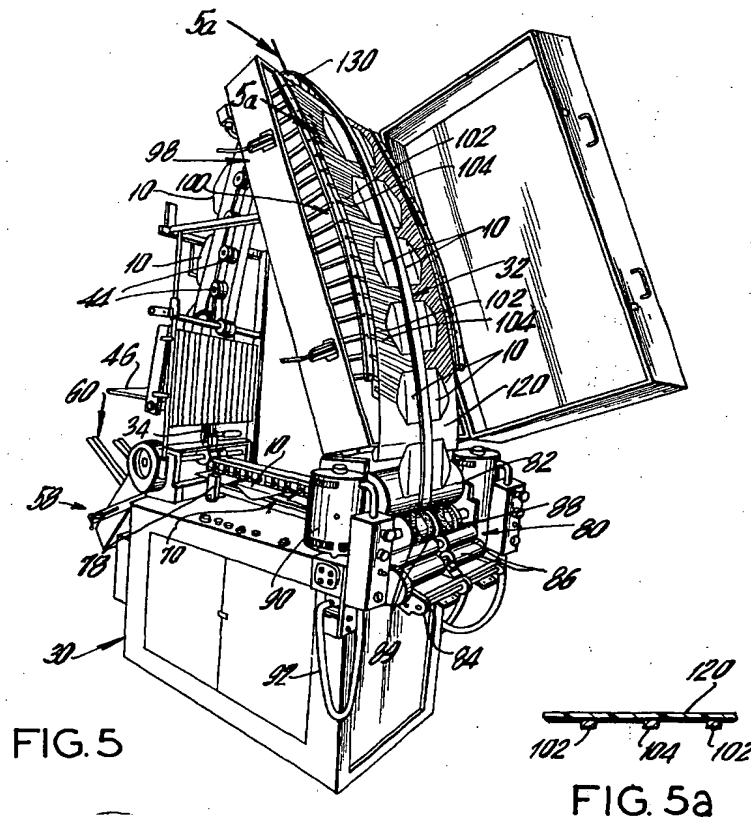
These rejections are believed to be overcome, and withdrawal thereof is respectfully requested.

**Rejections Based on COHN**

Claims 1-9, 11, 14-20, 42 and 43 have been rejected under 35 USC §103(a) as being unpatentable over COHN (U.S. Patent

3,965,851) in view of STROBUSH et al. (U.S. Patent 5,881,476), optionally considering AOKI (U.S. Publication 2002/0031608 A1). Claims 10, 12 and 13 have been rejected under 35 USC §103(a) as being unpatentable over COHN in view of STROBUSH et al., optionally considering AOKI, and further in view of REZNIK (U.S. Patent 4,694,586). These rejections are respectfully traversed.

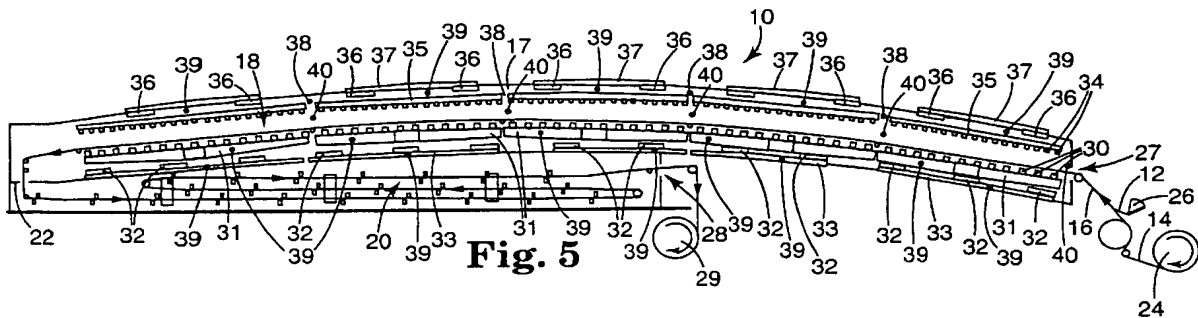
COHN pertains to an apparatus for applying sealing material to envelopes. Figure 5 of COHN is reproduced below.



COHN fails to disclose the angles of inclination, such as are set forth in claim 1 of the present invention.

The Official Action refers to Figures 5 and 23 of STROBUSH et al. and asserts that these figures show the coated

substrate being transported upward "almost vertically." See Official Action at page 7, lines 11-12. Figure 5 of STROBUSH et al. is reproduced below.



Neither COHN nor STROBUSH et al. disclose the angles of inclination, such as are set forth in claim 1 of the present invention. Additionally, since there is no indication that the drawing figures of COHN and STROBUSH et al. are to scale, it is impermissible to ascribe angles based upon observations of these drawing figures (as has been discussed above).

AOKI and REZNIK fail to address the deficiencies of COHN and STROBUSH et al.

One of ordinary skill in the art would thus fail to produce a claimed embodiment of the present invention from a knowledge of COHN, STROBUSH et al., AOKI and REZNIK. A *prima facie* case of unpatentability has thus not been made.

Further, even if one assumes *arguendo* that the applied art is sufficient to allege unpatentability, this unpatentability would be rebutted by the unexpected results of the present invention. These unexpected results of the present invention are



typified by the comparative data for the 60-90° inclination set forth in Table 1 of the specification, which is reproduced below.

|      | Coating<br>Method | Condition of Transporting Film |                                    |                                | Estimation |
|------|-------------------|--------------------------------|------------------------------------|--------------------------------|------------|
|      |                   | Position<br>of CS              | Entrance<br>Angle $\theta 1^\circ$ | Exit<br>Angle $\theta 2^\circ$ |            |
| Ex.1 | Extrusion         | Upside                         | 90                                 | 84                             | Good       |
| Ex.2 | Extrusion         | Upside                         | 80                                 | 70                             | Good       |
| Ex.3 | Extrusion         | Upside                         | 65                                 | 60                             | Good       |
| Ex.4 | Wire Bar          | Upside                         | 75                                 | 70                             | Good       |
| Co.1 | Extrusion         | Upside                         | 0                                  | 0                              | Refused    |
| Co.2 | Extrusion         | Upside                         | 15                                 | 20                             | Refused    |
| Co.3 | Wire Bar          | Downside                       | 0                                  | 0                              | Refused    |
| Co.4 | Wire Bar          | Downside                       | 45                                 | 45                             | Refused    |
| Co.5 | Extrusion         | Upside                         | 40                                 | 30                             | Refused    |

The advantages of the present invention are thus clear. These rejections are believed to be overcome, and withdrawal thereof is respectfully requested.

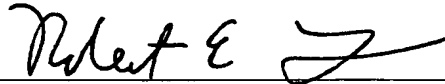
#### **Conclusion**

It is believed that the rejections have been overcome, obviated or rendered moot, and no issues remain. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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